

* LE'UZ 200/300 *

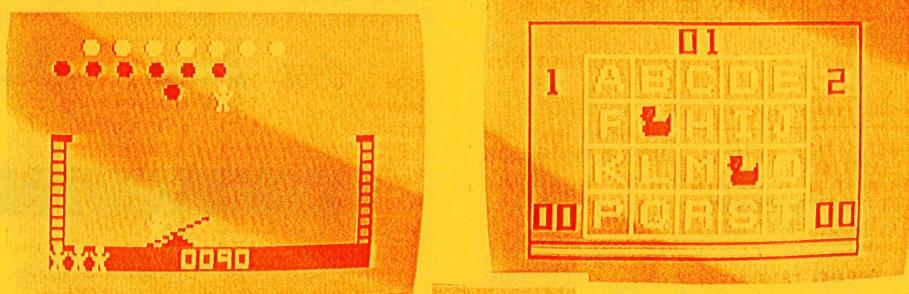
Owner's Operators Programmers

** THE SOUTH PACIFIC MAGAZINE FOR VZ COLOUR COMPUTERS **



AUGUST 1989.

#24 A\$2.00.



REMEMBER??

EDITORIAL

Hullo VZers, and others.

I am commencing to write this in the middle of June. This means that winter, (that's what Queenslanders call it) is now with us. Fancy 8 Degrees this morning. As some of you know I would like this weather for about half of the year, here at Toowong.

This leads me into mentioning the latest concern of this world of ours, ***the Greenhouse Effect and the Environment.***

What do you think can be done by **every one of us** to help improve the situation? To put a cat among the pigeons, is it real or are we being conned?

Perhaps we can use less printer paper when doing an LLISTING by putting the printer in condensed/small mode. Most times I print on both sides of the paper. Do you?

Perhaps we should pressure the printer paper manufacturers to start supplying us with off white paper. We are told that harmful chemicals are used to produce white paper.

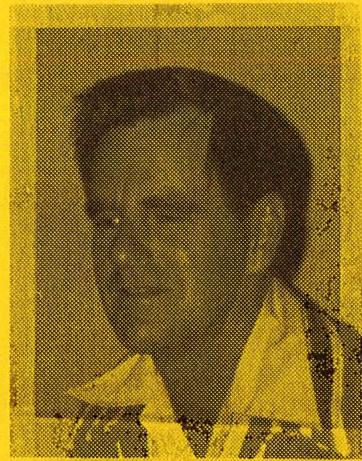
Anyway, there are many - many things that we can do to contribute to help improve our environment!! I would like to hear from folk in this regard.

Can anyone help in throwing some light on another matter? What has happened to Mr Peter Hill in New Zealand? I have not heard from him for over a year. I have been sending him LE'VZ but have not received any of his newsletters in the last year or so.

Also the subject of Mr Mark Harwood and his **VZ USER** newsletter. Is anyone producing it yet?

The prices of used personal computers is plummeting further. IBM compatibles under \$1000.00. Here in South East Queensland a firm produces a paper called ***The Trading Post.*** It advertises sellers used articles and buyers wanted articles. The seller pays the **TPP** a percentage of the item's sell price. If the article is not sold it costs the seller nothing.

In the "Computer" section there are plenty of cheap and expensive units for sale. I have noticed that there are many sellers who put prices on used VZ items that are far too high. For an example, \$150.00 for a VZ200. This compared with **AMSTRADS** for around \$500.00.



The most tragic event since I published **LE'VZ #23** was the unsuccessful democratic uprising in China. When it seemed that the students and workers were getting somewhere, many were gunned down and otherwise injured, or killed. High technology played its part quite well for some time in getting pictures and other information out to the outside world.

As I am a Radio Amateur, I wonder what part the "Ham" world played and is still playing.

All going to plan, commencing in the next **LE'VZ** will be a very interesting set of articles contributed by Mr Bob Kitch.

I would like to hear from purchasers of my **CASHBOOK LEDGER.** Have you been able to make the necessary changes to the programme to suit the required needs?

I understand Mr Joe Leon who is the editor/publisher of the ***Hunter Valley VZ Users Groups' Journal*** was very ill some months ago. I and I'M sure his many readers wish that he is well and truly recovered by now. Keep up the good work Joe, and from me, many thanks **amigo.**

600 Bless,

CONTENTS

High Res Screen Moves.	3.
In Brief.	4.
Cashbook Ledger BASIC programme.	5.
Easter Sunday - BASIC Programme.	7.
Vectors & Interrupts - Part 2. Fn	8.
Special Printer Fonts - Data	10.
What's in the other magazines.	10.
LE'VZ Formats.	11.
Information Contacts.	11.
Handy Utilities - BASIC Prog.	12.
VSOFTWAREZ Software for Sale.	15.
VSOFTWAREZ Firmware for Sale	16.
Other User Groups	16.

HI-RES SCREEN MOVE & PRESERVE UTILITIES

by Bob Kitch.

Four subroutines are provided that can be called from within any BASIC program. Often it is desirable to be able to preserve a 2K Hi-res screen so that a Lo-res (text) screen can be displayed. After certain instructions are carried out, the Hi-res screen may need to be restored. The BASIC commands SET & RESET are much too slow for this application. The fast Block Move command inherent in the Z80 is made for the task.

The subroutines given are general and relocatable for any VZ. The Block Move construct is called via the USR command. The Move routine is modified during execution so that it is used as a Block Fill routine and also moves the screen image both ways between Video RAM and the Hi-mem buffer.

1. SUBROUTINE 3000 - INITIALIZATION.

This section should be called early in the mainline program. It lowers TOM, reserves 2400 bytes of Hi-mem, loads 14 bytes of machine code and sets up a number of pointers. Ensure that these variables are not re-used during program execution.

MR & LR - MSB and LSB of starting address for Routine.
MS & LS - ditto for Storage buffer.

MV & LV - ditto for Video RAM.

SS & SS+1 - address for Source.

DS & DS+1 - address for Destination.

ZS & ZS+1 - address for LD (HL),XX bytes.

The 14 bytes of M/L are loaded into the buffer and are first set up as a Destructive Block Fill.

```
LD HL,SOURCE
LD DE,DESTINATION
LD BC,SIZE
LD (HL),CHARACTER
LDIR
RET
```

The initial colour of the screen buffer can be set by altering the second piece of data loaded in line 3330. The addresses for SOURCE and DESTINATION are initially set to dummy values of 255D.

2. SUBROUTINE 4000 - CLEAR HI-MEM BUFFER.

This is the Block Fill call which is also needed early in the program to fill the 2K buffer with a certain CHARACTER. It sets up the USR Vector, pokes in the SOURCE and DESTINATION addresses and finally modifies the M/L code to a Block Move type.

```
LD HL,BUFFER ;LS,MS
LD DE,BUFFER+1 ;L1,MS
LD BC,2048D
NOP
NOP
LDIR
RET
```

3. SUBROUTINE 4000 - MOVE SCREEN TO HI-MEM BUFFER.

This routine is called whenever the video screen located from 7000H to 77FFH is to be moved into the Hi-mem buffer. A Lo-res screen can then be displayed under program control.

```
LD HL,7000H ;LV,MV
LD DE,BUFFER ;LS,MS
LD BC,2048D
NOP
NOP
LDIR
RET
```

4. SUBROUTINE 5000 - MOVE HI-MEM BUFFER TO VIDEO RAM.

This sets up the Block Move as shown below and restores the Hi-res screen that had previously been buffered.

```
LD HL,BUFFER
LD DE,7000H
LD BC,2048D
NOP
NOP
LDIR
RET
```

Well that's about it! Generally speaking, SUBROUTINES 3000 and 4000 should be run early in the calling program, as they set up and pre-load the buffer area. I trust that users find these routines very useful - they have been invaluable when writing graphics editors.

As a Footnote, it is worth recording the action of the LDIR opcode. It's action is as follows :-

- i/ Assign (HL) to (DE)
- ii/ INC HL
- iii/ INC DE
- iv/ DEC BC
- v/ Repeat until BC=0

GOTO FOUR

```

1 ****
2 *** SCREEN MODE MOVER ***
3 *** A SET OF SUBROUTINES ***
4 *** TO SWITCH BETWEEN ***
5 *** HI & LD RES ***
6 *** BY ***
7 *** BOB KITCH ***
8 *** 6/87 ***
9 ****
10 '
15 THIS SET OF SUBROUTINES IS USED IN BRUCE'S ART GALLERY.
2998 '
2999 ***INITIALIZATION - CALL AT START OF PROGRAM.
3000 M1=PEEK(30898):L1=PEEK(30897) :***FIND TOM.
3010 TM=M1*256+L1 :***TOM.
3020 TM=TM-2400 :***RESERVE 2.4K BUFFER.
3030 MS=INT(TM/256):LS=TM-MS*256 :***NEW TOM.
3040 POKE 30898,MS:POKE 30897,LS :***SET NEW TOM.
3050 CLEAR 300 :***RESET POINTERS.
3060 TM=PEEK(30898)*256+PEEK(30898) :***NEW TOM.
3070 TM=TM+1 :***START ADDR. BUFFER.
3080 MR=INT(TM/256):LR=TM-MR*256 :***START POINTERS.
3090 FOR MS=TM TO TM+13 :***LOAD IN M/C.
3100 READ LS:ID=MS :***SET UP ADDR.
3110 IF ID>32767 THEN ID=ID-65536 :***CONV. TO S.INT.
3120 POKE ID,LS :***POKE IN MOVE CODE.
3130 NEXT MS
3140 SS=TM+1 :***ADDR. SOURCE.
3150 IF SS>32767 THEN SS=SS-65536 :***CONV. TO S.INT.
3160 DS=TM+4 :***ADDR. DESTIN.
3170 IF DS>32767 THEN DS=DS-65536 :***CONV. TO S.INT.
3180 ZS=TM+9 :***ADDR. 2K BUFF.
3190 IF ZS>32767 THEN ZS=ZS-65536 :***CONV. TO S.INT.
3200 TM=TM+30 :***START OF SCRN BUFF.
3210 MS=INT(TM/256):LS=TM-MS*256 :***START OF 2K BUFF.
3220 MV=112:LV=0 :***START OF VIDEO RAM.
3230 RETURN
3298 '
3299 ***DESTRUCTIVE BLOCK FILL ROUTINE.
3300 DATA 033,255,255 :LD HL,SOURCE.
3310 DATA 017,255,255 :LD DE,DESTINATION
3320 DATA 001,000,008 :LD BC,SIZE
3330 DATA 054,000 :LD (HL),CHARACTER
3340 DATA 237,176 :LD IR
3350 DATA 201 :RET
3998 '
3999 ***CLEAR BUFFER ROUTINE.
4000 POKE 30863,MR:POKE 30862,LR :***SET USR() POINTERS.
4010 POKE SS,LS:POKE SS+1,MS :***SOURCE ADDR.
4020 M1=MS:L1=LS+1 :***CALC SOURCE+1.
4030 IF L1>255 THEN L1=0:M1=M1+1 :***CHECK RANGE.
4040 POKE DS,L1:POKE DS+1,M1 :***DESTINATION ADDR.
4050 S=USR(0) :***SET 2K BUFFER.
4060 POKE ZS,0:POKE ZS+1,0 :***INSERT NOP'S
4070 RETURN
4998 '

```

```

4999 ***MOVE 2K SCREEN BUFFER TO TOM BUFFER.
5000 POKE 30863,MR:POKE 30862,LR :***SET USR() POINTERS.
5010 POKE SS,LV:POKE SS+1,MV :***SET SOURCE ADDR.
5020 POKE DS,LS:POKE DS+1,MS :***SET DESTINATION ADDR.
5030 S=USR(0) :***MOVE SCREEN TO HI-MEM.
5040 RETURN
5998 '
5999 ***MOVE TOM BUFFER INTO 2K VIDEO RAM...
6000 POKE 30863,MR:POKE 30862,LR :***SET USR() POINTERS.
6010 MODE(1) :***HI-RES MODE.
6020 POKE SS,LS:POKE SS+1,MS :***SET SOURCE ADDR.
6030 POKE DS,LV:POKE DS+1,MV :***SET DESTINATION ADDR.
6040 S=USR(0) :***MOVE SCREEN TO HI-MEM.
6050 RETURN
7000 END

```

IN BRIEF

During the recent Chinese pro-democracy protests, high technology and PCs were used to keep information flowing both in and out of the People's Republic of China. An electronic bulletin board called Social Culture was established by Chinese students.

The same political problems in China caused Amstrad's share prices to fall. The UK PC manufacturer has interests in China, Taiwan and of course Hong Kong. Most Amstrad printers are manufactured in China.

Telecom Australia won a \$2,000,000 contract to develop a sophisticated Command and Control computer system for the Queensland Police Force.

OTC recently installed an earth satellite station at Maghtab in Malta which will provide a direct satellite telecommunications link and allows IDD contact for the first time.

CATHBROOK LEDGER

BY JOHN D'ALTON, Part 2.

This continues from LE'VZ # 23.

This continues from LE VZ # 23.
The last line in BASIC was 7460. We are finishing printing the left hand side of the paper. From line 12000, the right side of the paper figures are totalled. The same applies to the additions section, 7100 to 7460, as lines 7000 to 7500. That is it could be simplified by writing a short routine.

From line 16000 to line 16300 is for correcting any data. Line 17000 to 17300 is to check that the Columns totals equal the Bank total. Press **Q** to quit your requirements.

Note that the Column names in line 16086 to 16097 can be changed to suit your requirements.
(J.D.)

(J.D.)

```

5000 REM///PRINT COLS TOTALS///
7502 JB=T2+T3+T4+T5
7508 LPRINTC1$;" TOTALS";
7510 LPRINTCHR$(16);"29";T1;:REM BANK
7550 LPRINTCHR$(16);"39";T2;:REM PARTS
7555 LPRINTCHR$(16);"48";T3;:REM CAR
7560 LPRINTCHR$(16);"57";T4;:REM PRIV
7565 LPRINTCHR$(16);"67";T5:REM STAT/PRINT
7600 REM/// 4 COLS ADDS //////
7630 TB=T2+T3+T4+T5
8000 REM///// FINAL ADD ///////
8010 LPRINT"PREVIOUS RUNNING TOTAL"
8012 LPRINT A6$+A6$
8060 LPRINT"NEW TOTALS"
8075 LPRINTA1$+A1$
8080 LPRINT
8155 LPRINT AB$+AB$
9100 GOTO12000
9200 END
12000 REM/\//\//\ RIGHT SIDE/\//\
12010 REM/\//\//\ TOP HEADING /\\
12050 LPRINTAB$+AB$:LPRINT
12060 LPRINTCHR$(14);A6$:REM DOUBLE WIDTH
12070 LPRINTCHR$(16);"30";C1$;" ";C2$:REM MONTH&YEAR
12170 LPRINTA6$
12180 LPRINTCHR$(15);
12190 LPRINT" "+D1$+" "+B9$;
12200 LPRINTCHR$(16);"24";D2$;:LPRINTCHR$(16);"33";D3$;
12210 LPRINTCHR$(16);"42";J4$;:LPRINTCHR$(16)"51"D4$;
12220 LPRINTCHR$(16);"60";D5$;:LPRINTCHR$(16)"69"D6$;
12230 LPRINT" "+D9$+" "+D8$;
12240 LPRINTCHR$(16);"24";J1$;:LPRINTCHR$(16);"33";J2$;
12250 LPRINTCHR$(16);"42";J5$;:LPRINTCHR$(16);"51";J3$;
12251 LPRINTCHR$(16);"60";J6$;:LPRINTCHR$(16)"69"J7$;
12260 LPRINTA6$+A6$
12300 REM\\\\\\\\ PRINTOUT \\\\\\\\\
12310 FORR=1TOE
12320 U$="######"
12325 LPRINT" ";
12330 LPRINTUSING U$;D(R,9);D(R,10);D(R,11);D(R,12);D(R,13)
12340 LPRINTUSING U$;D(R,14);D(R,15);D(R,16)
12350 NEXTR
12400 REM\\\\ ALL ADDITIONS \\\\\
12420 LPRINT:LPRINT
12435 LPRINTA6$+A6$
12440 REM\\\\ ENT/TRAV \\\\\\\\\
14000 REM//// ENT/TRAV //////
14035 R=0:N=0
14040 R=R+1:N=N+1
14045 K(N)=D(R,9)
14050 TERETHEN14040

```

14055 REM//// ENT/TRAV ADDS///
14060 T6=0
14065 X=X+1
14070 FORX=1TON
14075 T6=T6+K(X)
14080 NEXTX
14100 REM///SPEC1/DRAW//////////
14115 R=0:N=0
14120 R=R+1:N=N+1
14125 K(N)=D(R,10)
14130 IFR<THEN14120
14135 REM///SPEC1/DRAW ADDS////
14140 T7=0
14145 X=X+1
14150 FORX=1TON
14155 T7=T7+K(X)
14160 NEXTX
14200 REM /// BANK CHARGES/////
14215 R=0:N=0
14220 R=R+1:N=N+1
14225 K(N)=D(R,11)
14230 IFR<THEN14220
14235 REM///BANK CHARGS ADDS///
14240 T8=0
14245 X=X+1
14250 FORX=1TON
14255 T8=T8+K(X)
14260 NEXTX
14300 REM///TRANSF 37 ST ///////////////
14315 R=0:N=0
14320 R=R+1:N=N+1
14325 K(N)=D(R,12)
14330 IFR<THEN14320
14335 REM///TRANSF 37 ADDS ///////////////
14340 T9=0
14345 X=X+1
14350 FORX=1TON
14355 T9=T9+K(X)
14360 NEXTX
14400 REM//////// ADVERTS ///////////////
14415 R=0:N=0
14420 R=R+1:N=N+1
14425 K(N)=D(R,13)
14430 IFR<THEN14420
14435 REM/// ADVERTS ADDS///////////////
14440 S1=0
14445 X=X+1
14450 FORX=1TON
14455 S1=S1+K(X)
14460 NEXTX

GOTO SIX

PAGE 6 LE'VZ 200/300 OOP. #24.

```

14500 REM///PETTY CASH/////////
14535 R=0:N=0
14540 R=R+1:N=N+1
14545 K(N)=D(R,14)
14550 IFR<ETHEN14540
14555 REM///PETTY CASH ADDS///
14560 S2=0
14565 X=X+1
14570 FORX=1TON
14575 S2=S2+K(X)
14580 NEXTX
14600 REM/// SUNDRIES //////////
14615 R=0:N=0
14620 R=R+1:N=N+1
14625 K(N)=D(R,15)
14630 IFR<ETHEN14620
14635 REM/// SUNDRIES ADDS///
14640 S3=0
14645 X=X+1
14650 FORX=1TON
14655 S3=S3+K(X)
14660 NEXTX
14700 REM/// PROP/ INV //////////
14715 R=0:N=0
14720 R=R+1:N=N+1
14725 K(N)=D(R,16)
14730 IFR<ETHEN14720
14735 REM///PROP INV ADDS///
14740 S4=0
14745 X=X+1
14750 FORX=1TON
14755 S4=S4+K(X)
14760 NEXTX
15000 REM///PRINT COLS TOTALS//
15040 TC=T6+T7+T8+T9+S1+S2+S3+S4
15080 LPRINT"      ";T6;"      ";T7;
15100 LPRINTCHR$(16);"28";T8;:REM BANK CHGS
15110 LPRINTCHR$(16);"35";T9;:REM TRNSF 37
15120 LPRINTCHR$(16);"44";S1;:REM ADVS
15130 LPRINTCHR$(16);"53";S2;:REM P/CASH
15140 LPRINTCHR$(16);"62";S3;:REM SUND
15150 LPRINTCHR$(16);"71";S4;:REM PROP/INV
15160 LPRINT:LPRINT
15200 LPRINTA6$+A6$
15210 LPRINT
15215 LPRINTA1$+A1$
15290 TE=TB+TC
15300 IFTE=T1THENLPRINTC1$;" TOTALS CORRECT $";TE;"      ";
15310 IFTE<>T1THENLPRINT" TOTALS INCORRECT";TE;"      ";
15318 LPRINTTB;"      ";"+";"      ";TC;" = "T1;"[ ]"
15400 LPRINTA8$+A8$
15500 GOTO100
16000 REM //// CORRECTION ///
16020 CLS
16030 INPUT"WHICH RECORD (ROW)?";R:PRINT
16033 PRINT"WHICH GROUP 1 = DATE NAME CHQ" 2 = 4 TO 16";X
16034 INPUT"WHICH GROUP 2 =BANK ONWARDS";X
16035 IFX=1GOTO16040
16036 IFX=2GOTO16080
16038 IFX>2THENPRINT"CHOOSE CORRECTLY";:SOUND30,9: GOTO16033
16040 INPUT"WHICH COL 1 TO 3";C
16043 IFC>3THENPRINT"CHOOSE CORRECTLY";:SOUND30,9: GOTO1604
16050 PRINT:PRINT
16060 PRINTD$(R,C)
16065 PRINT:PRINT
16070 PRINT"NOW TYPE IN CORRECTION"
16073 INPUTD$(R,C)
16075 GOTO16200
16080 INPUT"WHICH FIELD 4 TO 16";CA
16083 IFCA<4ORCA>16THENPRINT"CHOOSE CORCTLY";:SOUND30,9: GOTO16080
16084 PRINT:PRINT
16085 IFCA=4THENPRINT"BANK"
16086 IFCA=5THENPRINT"CATTLE CODE-4"
16087 IFCA=6THENPRINT"SHEEP CODE-5"
16088 IFCA=7THENPRINT"FOODER CODE-10"
16089 IFCA=8THENPRINT"INT/INS RATE RENT"
16090 IFCA=9THENPRINT"REPAIRS/MAINT"
16091 IFCA=10THENPRINT"IMPROVEMENTS"
16092 IFCA=11THENPRINT"POWER FUEL OIL"
16093 IFCA=12THENPRINT"BANK CHARGES"7 A ST.
16094 IFCA=13THENPRINT"POSTAGE PHONE"
16095 IFCA=14THENPRINT"ADVERTS SUBS ETC"
16096 IFCA=15THENPRINT"NON FARM DRAWINGS"
16097 IFCA=16THENPRINT"PLANT EQUIP"
16188 PRINTD(R,CA)
16189 PRINT:PRINT
16190 PRINT"NOW TYPE IN CORRECTION"
16195 INPUTD(R,CA)
16200 INPUT"PRESS RETURN TO CONTINUE";Q$
16290 CLS
16300 GOTO100
17000 REM\\\\\\ VIEW ADDS \\\\\\\
17005 CLS
17020 R=0:N=0
17030 R=R+1:N=N+1
17035 K(N)=D(R,4)
17040 IFR<ETHEN17030
17045 T1=0
17050 X=X+1
17055 FORX=1TON
17060 T1=T1+K(X)
17065 NEXTX
17080 PRINT"BANK TOTAL      ";T1
17100 REM\\\\\\ ALL OTHER TOTALS
17108 TF=0
17110 FORZ=5TO16
17120 R=0:N=0
17130 R=R+1:N=N+1
17135 K(N)=D(R,Z)
17140 IFR<ETHEN17130
17150 X=X+1
17155 FORX=1TON
17160 TF=TF+K(X)
17165 NEXTX
17170 NEXTZ
17180 PRINT"ALL COLUMNS TOTALS      ";TF
17185 PRINT:PRINT
17192 IFT1=TFTHEN17210

```

GOTO TEN

EASTER SUNDAY

YEAR	MONTH	DATE
1978	3	26
1979	4	15
1980	4	6
1981	4	19
1982	4	11
1983	4	3
1984	4	22
1985	4	7
1986	3	30
1987	4	19
1988	4	3
1989	3	26
1990	4	15
1991	3	31
1992	4	19
1993	4	11
1994	4	3
1995	4	16
1996	4	7
1997	3	30
1998	4	12
1999	4	4
2000	4	23

***** EASTER SUNDAY *****

This short **BASIC** programme allows one to find out in any year when Easter Sunday was or will be. The programme as LISTed is for years 1978 to 2000 A.D. An INPUT could be written in to allow one to select any year/s. See if you can do that within a few minutes.

(J.D.)

```

100 LPRINT"EASTER SUNDAY"
190 LPRINT: LPRINT" YEAR"           MONTH"           DATE"
200 FOR Y=1978 TO 2000
210 J=Y-19*(INT(Y/19))
220 K=INT(Y/100)
230 L=Y-100*K
240 M=INT(K/4)
250 N=K-4*M
260 P=INT((K+8)/25)
270 Q=INT((K-P+1)/3)
280 R=19*j+k-m-q+15-30*(INT((19*j+k-m-q+15)/30))
290 S=INT(L/4)
300 U=L-4*S
310 V=32+2*N+2*S-R-U-7*(INT((32+2*N+2*S-R-U)/7))
320 W=INT((J+11*R+22*V)/451)
330 X=INT((R+V-7*W+114)/31)
340 Z=R+V-7*W+115-31*X
350 LPRINT Y, X, Z
360 NEXT Y
370 STOP
380 END

```



HELP

Mr Col Paton of 225 Pallas St, MARYBOROUGH QLD 4650
 Would like to increase the volume of sound of the VZ beep.
 Can anyone help?

*** VECTORS & INTERRUPTS - EXPLAINED ***

by Bob Kitch.

Part 2.

This excellent contribution from Bob continues
from LE'VZ #23.

```

1 ****
2 *** INTERRUPT DRIVEN ***
3 *** REAL TIME CLOCK ***
4 *** FOR VZ COMPUTER ***
5 *** BY BOB KITCH ***
6 ***TIME KEEPING ROUTINE***
7 *** IS COMPLETELY ***
8 *** RELOCATABLE ***
9 ****
10 '
20 GOTO 100
26 '
27 ***USEFUL NUMERIC LOADING SUB-ROUTINES.
28 '
29 ***CONVERT UNSIGNED TO SIGNED DECIMAL - PASSED IN UD & SD%.
30 IF UD>32767 THEN SD%=INT(UD-65536) ELSE SD%=INT(UD)
35 RETURN
38 '
39 ***CONVERT UNSIGNED DECIMAL TO MSB & LSB - IN UD, MS%, LS%.
40 MS%=INT(UD/256):LS%=INT(UD-256*MS%)
45 RETURN
48 '
49 ***CONVERT SIGNED TO UNSIGNED DECIMAL - PASSED IN SD% & UD.
50 IF SD%<0 THEN UD=SD%+65536 ELSE UD=SD%
55 RETURN
58 '
59 ***PUT UP INTRO MESSAGE.
100 CLS:PRINT@4,"REAL TIME CLOCK ROUTINE"
110 PRINT@197,"LOADING MACHINE CODE"
199 '
200 ***LOWER TOM TO ENABLE ROUTINE TO BE STORED.
210 TM=(256*PEEK(30898)+PEEK(30897))-100 :***RESERVE 99 BYTES.
220 UD=TM:GOSUB 40:POKE 30898,MS%:POKE 30897,LS%
230 CLEAR 100 :***RESET POINTERS.
240 S%=0:M%=0:H%=0:SAY%=0:MAX%=0:HAY%=0
250 UD=0:TM=0:AD=0:SDX=0:MSZ=0:LSZ=0 :***INITIALIZE STORAGE
260 IX=0:JZ=0:DVZ=0:CSZ=0 :***BEFORE DIMEN'ING.
270 DIM VAX(2,23) :***INITIALIZE ARRAY.
280 TM=256*PEEK(30898)+PEEK(30897) :***NEW TOM.
299 '
300 ***READ IN TIME KEEPING ROUTINE.
310 FOR AD=TM+1 TO TM+77
320 UD=AD:GOSUB 30:READ DV%:POKE SD%,DV%
330 CS%=CS%+DV%
340 NEXT AD
350 IF CS%>8110 THEN PRINT@293,"CHECKSUM NOT CORRECT":CS%:STOP
399 '
400 ***INITIALIZE POINTERS IN VAX().
410 FOR IX=0 TO 23
420 READ VAX(0,IX):UD=TM+VAX(0,IX):GOSUB 30:GOSUB 40
430 VAX(0,IX)=SD%:VAX(1,IX)=LS%:VAX(2,IX)=MS%
440 NEXT IX

```

COPYRIGHT (C) 1989.

JOHN D'ALTON VSOFTWAREZ,
39 AGNES ST. TOOWONG. QUEENSLAND.
AUSTRALIA.
'PHONE (07) 371 3707
AUGUST 1989.

LE'VZ 200/300 OOP IS PUBLISHED APPROXIMATELY EVERY
THREE MONTHS.

All material is subject to COPYRIGHT. Contributed
material is reproduced with the permission of the
contributor on the understanding that such material
is for private use of readers only.
COPYRIGHT is retained by the author.

*He that diligently
seeketh good procureth
favour: but he that
seeketh mischief, it
shall come to him.*

Proverbs 12:27.

499
 500 ***MODIFY DUMMY ADDRESSES IN TIME KEEPING ROUTINE.
 510 POKE VA%(0,4),VA%(1,0):POKE VA%(0,5),VA%(2,0):***<KOUNT>
 520 FOR I%= 1 TO 3 : ***<SEC><MIN><HOUR>
 530 FOR J%=I%*6 TO I%*6+4 STEP 2 : ***3 OCC'ENCES EACH
 540 POKE VA%(0,J%),VA%(1,I%):POKE VA%(0,J%+1),VA%(2,I%)
 550 NEXT J%
 560 NEXT I%
 570 SA%=VA%(0,1):MAX=VA%(0,2):HA%=VA%(0,3):'ADDR FOR SEC.MIN.HR
 599 '
 600 ***SET UP JUMP ADDRESS IN INTERRUPT VECTOR.
 610 UD=TM+1:GOSUB 40
 620 POKE 30846,LS%:POKE 30847,MS% : ***BYTES 2 & 3.
 630 'GO TO 20000 : ***DEBUG JUMP TO PRINTER LISTING.
 699 '
 700 ***SET TIME.
 710 PRINT@293,"***ENTER CURRENT TIME."
 720 PRINT@325,"INPUT HOURS";:INPUT DV%
 730 IF DV%<1 OR DV%>12 THEN GOTO 720 ELSE POKE HA%,DV%
 740 PRINT@389,"INPUT MINS ";:INPUT DV%
 750 IF DV%<0 OR DV%>59 THEN GOTO 740 ELSE POKE MA%,DV%
 799 '
 800 ***STEAL INTERRUPT VECTOR.
 810 POKE 30845,195 : ***JUMP TO TIME ROUTINE.
 899 '
 900 ***DISPLAY TIME ON BOTTOM LINE OF SCREEN.
 910 FOR I%=29120 TO 29151
 920 POKE I%,109
 930 NEXT I%
 940 T\$="TIME ##:##:#" : ***DISPLAY TEMPLATE.
 950 'CLS : ***REMOVE REM IF REQ'D.
 960 SA%=PEEK(SA%):MA%=PEEK(MA%):HA%=PEEK(HA%)
 970 PRINT@484,USING T\$;H%,M%,S%;
 980 GOTO 960
 999 '
 2000 ***TIME KEEPING ROUTINE***
 2010 ***ALL ADDRESSES SET TO 255 ARE DUMMY PARAMETERS AND ARE
 2020 ***RESET FROM BASIC.
 2030 ***REGISTERS USED AF, BC, HL.
 3000 '
 3010 : ***COUNT DOWN SECONDS.
 3020 DATA 033,255,255: LD HL,KOUNT
 3030 DATA 053 : DEC(HL)
 3040 DATA 192 : RET NZ
 3050 : ***SECONDS ROUTINE.
 3060 DATA 054,050 : LD (HL),50
 3070 DATA 058,255,255: LD A,(SEC)
 3080 DATA 060 : INC A
 3090 DATA 254,060 : CP 60
 3100 DATA 040,005 : JR Z,L1
 3110 DATA 050,255,255: LD (SEC),A
 3120 DATA 024,056 : JR L4
 3130 : ***MINUTES ROUTINE.
 3140 DATA 033,255,255: L1 LD HL,SEC
 3150 DATA 054,000 : LD (HL),0
 3160 DATA 058,255,255: LD A,(MIN)
 3170 DATA 060 : INC A
 3180 DATA 254,060 : CP 60
 3190 DATA 040,005 : JR Z,L2
 3200 DATA 050,255,255: LD (MIN),A
 3210 DATA 024,038 : JR L4

3220 : ***HOUR ROUTINE.
 3230 DATA 033,255,255: L2 LD HL,MIN
 3240 DATA 054,000 : LD (HL),0
 3250 DATA 001,000,001: LD BC,256
 3260 DATA 033,042,000: LD HL,42
 3270 DATA 205,092,052: CALL 345CH
 3280 DATA 058,255,255: LD A,(HOUR)
 3290 DATA 060 : INC A
 3300 DATA 254,013 : CP 13
 3310 DATA 040,005 : JR Z,L3
 3320 DATA 050,255,255: LD (HOUR),A
 3330 DATA 024,011 : JR L4
 3340 : ***HOUR RESET ROUTINE.
 3350 DATA 033,255,255: L3 LD HL,HOUR
 3360 DATA 054,001 : LD (HL),1
 3370 DATA 024,004 : JR L4
 3380 DATA 000 : DS KOUNT
 3390 DATA 000 : DS SEC
 3400 DATA 000 : DS MIN
 3410 DATA 000 : DS HOUR
 3420 : ***SCREEN UPDATE ROUTINE HERE.
 3430 DATA 201 : L4 RET
 3999 '
 4000 ***OFFSETS FOR PARAMETER STORAGE ABOVE ROUTINE.
 4010 DATA 73 : KOUNT
 4020 DATA 74 : SEC
 4030 DATA 75 : MIN
 4040 DATA 76 : HOUR
 4200 ***OFFSETS FOR PARAMETERS IN MACHINE CODE ROUTINE.
 4210 DATA 2,3 : <KOUNT>
 4220 DATA 9,10 : <SEC>
 4230 DATA 17,18 : <SEC>
 4240 DATA 22,23 : <SEC>
 4250 DATA 27,28 : <MIN>
 4260 DATA 35,36 : <MIN>
 4270 DATA 40,41 : <MIN>
 4280 DATA 54,55 : <HOUR>
 4290 DATA 62,63 : <HOUR>
 4300 DATA 67,68 : <HOUR>
 4310 STOP
 4999 '
 9999 ***UPDATE DISK FILE.
 10000 ERA"RTCLOCK":SAVE"RTCLOCK"
 10010 STOP
 19999 '
 20000 ***DEBUG DUMP TO PRINTER.
 20010 ***TO ACTIVATE, TAKE OUT REMARK IN LINE#630.
 20020 LPRINT"DEBUG DUMP FROM REAL TIME CLOCK":LPRINT
 20030 LPRINT"TM=",TM:LPRINT
 20040 LPRINT"INTERRUPT VECTOR",PEEK(30846),PEEK(30847):LPRINT
 20050 LPRINT"PARAMETERS"
 20060 FOR I%=0 TO 3
 20070 LPRINT I%,VA%(0,I%),VA%(1,I%),VA%(2,I%)
 20080 NEXT I%:LPRINT
 20090 LPRINT"POINTERS IN VA()"
 20100 FOR I%=4 TO 23
 20110 LPRINT I%,VA%(0,I%),VA%(1,I%),VA%(2,I%)
 20120 NEXT I%:LPRINT
 30000 END

SPECIAL PRINT FONT

BY JOHN D'ALTON.

Please refer to my earlier articles guiding you to design and print special characters.

These articles are in LE'VZ #21 and #22. In #21 I printed the data for the letters A, B and C only. Here is printed the whole alphabet, A to Z. This font will work OK with the *Brother* printer (M10 I think). If you are working with *QUICKWRITE*, the left "smaller than" symbol "<" must be replaced with a "square left bracket", "[". I had to print it this way so that my printer does not think the data number inside the brackets is a printer code.

This is easily done in a few seconds using "FIND AND REPLACE". The first five codes as underlined, 27 to 59 are the control codes. Letter "A" is:- 128, 14, 16, 46, 80, 168, 64, 46, 16, 14, 0, 0.

I have printed the new font A to Z in double-height and double-width.

(J.D.)

```
<271<381<01<341<591<1281<141<161<461<801<1681<641<461<1
61<141<01<01<1281<2541<01<1461<01<1861<01<1461<01<1081<
01<01<1281<1241<01<1301<01<1301<01<1981<01<1981<01<01<1
281<2541<01<2541<01<1301<01<1301<01<1241<01<01<1281<254
1<01<2541<01<1541<01<1981<01<1981<01<01<1281<2541<01<25
41<01<1521<01<1281<01<1921<01<01<1281<2541<01<2541<01<1
301<01<1541<01<2221<01<01<1281<2541<01<2541<01<161<01<1
61<01<2541<01<01<1281<01<01<1301<01<2541<01<2541<1301<0
1<01<01<1281<1421<01<1301<01<2541<01<2541<01<1281<01<01
<1281<2541<01<401<01<681<01<1301<01<01<1281<254
1<01<2541<01<21<01<21<01<61<01<01<1281<301<321<941<01<2
241<241<2241<01<1261<01<01<1281<2541<01<2541<01<321<161
<81<01<2541<01<01<1281<1241<01<2541<01<1301<01<1301<01<
1241<01<01<1281<2541<01<2541<01<1441<01<1441<01<961<01<
01<1281<1241<01<2541<01<1381<01<1341<01<1241<01<01<1281
<2541<01<2541<01<1441<81<1481<01<981<01<01<1281<1161<01
<2461<01<1461<01<1461<01<921<01<01<1281<1281<01<1281<25
41<01<2541<01<1281<01<01<1281<2521<01<2541<01<21<0
1<21<01<2541<01<01<1281<2241<161<2481<41<101<41<81<161<
2241<01<01<1281<2521<01<2541<81<161<81<01<2521<01<01
<1281<1941<321<841<401<201<441<1001<01<1301<01<01<1281<
1921<641<301<321<301<321<01<641<1281<01<01<1281<1301<13
41<1381<1481<1701<1461<2261<1941<1301<01<01
```

A B C D E F G H I
J K L M N O P O R
S T U V W X Y Z



```
17195 PRINT:PRINT"BOTH TOTALS MUST BE THE SAME, DO CORRECTIONS"
17198 GOTO17215
17210 PRINT"OK!!! BOTH TOTALS ARE THE SAME":GOTO17250
17215 PRINT:PRINT:SOUND30,8:SOUND20,8
17250 PRINT:PRINT: INPUT"PRESS RETURN TO CONTINUE";Q$
17280 CLS
17300 GOTO100
20000 REM(((((( ERROR SOUND )))))
20010 FORX=1TO5
20020 SOUND10,2:SOUND30,1
20030 NEXTX
20040 RETURN
```

*** * WHAT'S IN THE OTHER MAGAZINES * ***

I think this section will help VZ users and OOPs know what other information is available from other sources. This means in club magazines, newsletter and journals as well as commercial publications.

Hunter Valley VZ User Group - Mar/Apr. 1989.

1. Maths Mastery or Mystery.
2. Tapedisk Source Converter.
3. Enhancing List Command.
4. Hi-Res Screen Move & Preserve.
5. Hi/Low - Res copier II.
6. Hardware 128K Sideways Ram - Joe Leon.
7. Hardware VZ Super Graphics II Joe Leon.

VZ DOWN UNDER May/June 1989.

1. VZ Menu 73.
2. Vector Theft.
3. Pokies - BASIC programme.
4. BASIC Made Easy.

Hunter Valley VZ User Group - May/June 1989.

1. I.O. Put Out Programme.
2. Vectors and Interrupts.
3. Putget + 6.
4. Directory Label Utility.
5. Check Disk Routine.
6. Contents List #1 to #24.

LE'VZ FORMATS.

To help me time-wise to make LE'VZ a better magazine, and yourself to get the most out of it, please read this page.

ALL PRICES are in Australian Dollars.

CURRENT ISSUE price is A\$2.00 which includes surface/air postage within Australia and Air Mail to New Zealand. If you require more than one copy at one time, extra money must be sent to cover postage.

LE'VZ IS (C) COPYRIGHT.

NEW MEMBERS must start by sending \$4.00 as I do not charge a yearly subscription. This makes it worth while entering your name, address and other data into our D'BASE. You then receive the current issue if it is in a certain time period between the main send LE'VZ runs. If that is close to the next issue, you will receive that and not the "old" current issue. New Members can send more than \$4.00, as long as it is in multiples of \$2.00, but nor more than \$10.00.

Present OOPs have their \$ credit printed at the top of their name and address label if sent in the main run. If your credit is less than \$2.00, then a little reminder slip is included with the LE'VZ sent, stating that this is your last issue. Some folk have various money amounts left over from other software or hardware purchases put into their LE'VZ credit, and so odd \$ amounts do occur.

BACK ISSUES are from #16 to the current issue. The price is \$3.00 each. This includes surface/air postage within Australia and Air Mail to New Zealand. If you require more than two copies at one time, extra money must be sent to cover postage.

We usually have most Back Issues in stock otherwise I print more as time permits. We send what we have and back order the others for you if required. If they are not sent within a couple of months, or with the next Current issue, please remind us.

GENERAL LIST refers to OOPs who want their name, address and data made available to other OOPs when asked for. You may like to contact OOPs in your state, or OOPs with VZ200s. Not all OOPs want their name and information made public, so if that applies to you, you must answer N (no), IF YOU DO NOT WANT YOUR INFO MADE PUBLIC, ANSWER N (no) ON THE DATA SHEET. IF YOU DO NOT ANSWER Y (yes) OR N (no) THEN YOU WILL AUTOMATICALLY BE PUT ON THE GENERAL LIST.

Remember, you may receive letters from OOPs months after you may have sold your VZ.

ANY COMMUNICATION to me that requires a written reply must be accompanied by a Self Addressed Stamped Envelope. Do not expect an immediate reply, as I may need to contact others to formulate an answer.

Always state your record number. That could be between A02 and A76, B01 and B98 or C01 and C98. I have about 240 financial and unfinancial folk to keep track of. From LE'VZ #15, your record number and \$ credit are printed at the top of your name and address label.

DO NOT TELEPHONE ME ON SUNDAY!!!

CIRCUIT, ROM and PROGRAMME LISTING PRINTOUTS can be sent to you at 20C per A4 page plus postage. Do not ask for the complete VZ ROM listing as it is very long and is about 15MM in thickness.

LETTERS TO THE EDITOR are welcome either as general comments, complaints or asking for help. As with contributors, please ensure that your typewriter or printer prints clear and DARK. In the new 35 character normal size print, IE. 90MM line length, right justified or wrapped. If you have to write by hand, use a RED pen and write in the format just mentioned.

ADVERTISING is a free service to OOPs who are financial, for personal use only. Please use the above 35 character format. About 100 words or less.

CONTRIBUTIONS are very welcome. Please write your letter on a separate piece of paper to your contribution, which allows separate filing of material. You can send in programme listings in M/L or BASIC. Hardware modification or equipment drawings. Hints and any useful information. As above, use the new 35 character format except if it is a large circuit, drawing or photo. If it is a full page contribution reduce by photo copying so that there is a 20MM margin all the way around.

In fact I would like to receive more hardware contributions. Also photos of your equipment would interest others. There is a little problem here though as different photo copiers reproduce certain colours differently. We can but try.

BASIC AND M/L PROGRAMME LISTINGS need special requirements.

Programme listings in M/L or BASIC can be sent as printed in normal size print which I can reduce-copy to make the master. Please make sure the print is dark and clear. The better approach is to send the programme on disc or tape. This enables me to give it a short test and check that it does at least does RUN. I can then print it in reduced mode while **LISTING** it.

The other method that I can now use is to convert the **BASIC** programme into a file suitable for use with our **QUICKWRITE TEXT EDITOR** and printed in the preferred column size, IE 80MM width. Note that due to "line wrap-around" when printing a line with less than 55 characters there will be lines that appear to not have a **BASIC** line number.

W files made with the D.S.E. Editor Assembler can also be loaded into our **QUICKWRITE TEXT EDITOR**, edited and printed as required.

TAPE/DISC CONTRIBUTIONS are therefore the best to send in this regard. This applies to programme listings or text. In regards to text, please send on E&M Wordprocessor tape which I can convert to **QUICKWRITE** Wordprocessor files or **QUICKWRITE** files on disc. Send in a padded post bag, and we will return it to you as soon as possible. We will pay the return postage. In this way if it is a programme, it can be later issued as a **PUBLIC DOMAIN** programme. You must let me know if you will allow this to happen.

Finally, I do not promise to print any or all contributions, this is at my discretion.

Muchas Gracias.

INFORMATION CONTACTS

Here are some other folk who you can contact. Always include a SASE, if you require a written reply. If you don't live in the same country, send a couple of International Reply Coupons. These are available a Post Offices throughout the world. Please use good judgement if you telephone, perhaps not on Sundays. Check with the person concerned.

Graphics, M/L, printer info, educational.
Mr. Larry Taylor, 4 Columbia Court, SPRINGWOOD, QLD. 4127. Phone (07) 208 1258.

M/L, hardware, BASIC programming and his special list of all types of info.
Mr. Bob Kitch, 7 Eunella St., KENMORE, QLD. 4069. Phone (07) 378 3745.

Software list.
Mr. Eddie Tomes, 3 Kilkenny St., CAPALABA, QLD. 4157. Phone (07) 390 2797.

General info.
Mr. Stan Noble, 307 Mt. Crosby Rd., CHIWAR, QLD. Phone (07) 281 7854.

Communications, Modems, RTTY.
Mr. Irving Spackman, 78 Waima Crescent, TITIRANGI, AUCKLAND. New Zealand.

RTTY Units.
Mr. Col Paton, VK4BCP, 225 Pallas St., MARYBOROUGH, QLD. 4650. Phone (07) 221 090.

Chip 8 programming.
Mr. Jeremy Lee, c/o P.O. Box 221, ASHGROVE, QLD. 4060. Phone (07) 379 7988.

H A N D Y U T I L I T I E S

BY CAINE COSESKI.

This BASIC LISTING is as the heading says, is a group of handy routines that folk should find usefull. Thanks Caine.

(J.D.)

```

1 CLS
2 ' BY CAINE COSESKI
3 ' HANDY UTILITIES
5 REM MAIN MENU
6 POKE 30779,1
8 SOUND 1,4.5;30,4.5
9 POKE 30744,1:POKE 30779,0
10 CLS
20 PRINT" W E L C O M E T O H A N D Y "
70 PRINT
80 PRINT" 1. AVERAGE"
90 PRINT" 2. H.C.FACTOR"
100 PRINT" 3. L.C.MULTIPLE"
110 PRINT" 4. RADIAN & DEGREE"
120 PRINT" 5. TEMPERATURE"
130 PRINT" 6. FOOT & METRE"
140 PRINT" 7. POUND & KILOGRAM"
150 PRINT" 8. GALLON AND LITRE"
160 PRINT" 9. DEPRECIATION"
170 PRINT" A. NUMBER SORTING"
180 PRINT" B. WORD SORTING"
190 PRINT" C. MELODY"
195 PRINT" D. EXIT"
210 PRINT" WHAT IS YOUR CHOICE";
220 K$=INKEY$
230 C$=INKEY$:IF C$="" THEN 230
240 IF C$="1" THEN 500
250 IF C$="2" THEN 1000
260 IF C$="3" THEN 1500
270 IF C$="4" THEN 2000
275 IF C$="5" THEN 2500
280 IF C$="6" THEN 3000
292 IF C$="7" THEN 3500
293 IF C$="8" THEN 4000
294 IF C$="9" THEN 4500
295 IF C$="A" THEN 5000
296 IF C$="B" THEN 5500
297 IF C$="C" THEN 6000
298 IF C$="D" THEN 9000
299 IF C$=<>"" THEN GOTO 5
300 END
500 REM *****AVERAGE*****
501 POKE 30779,1
502 SOUND 1,3
504 POKE 30779,0
510 CLS
520 PRINT" W E L C O M E "
530 PRINT" TO"
540 PRINT" SUM AND AVERAGE"
543 PRINT"
550 INPUT" ENTER HOW MANY NUMBERS. ";A
560 IF A=<0 THEN GOTO 561 ELSE GOTO 570
561 PRINT"DON'T BE STUPID, I KNOW WHEN YOU"
562 PRINT"DON'T PRESS NOTHING"
563 FOR L=1 TO 1500:NEXT L
564 GOTO 500
570 FOR I=1 TO A
590 PRINT"ENTER NOS. ";I;"=";
600 INPUT B
605 IF B=<0 THEN GOTO 606 ELSE 610
606 PRINT"PLEASE DO NOT, I HATE
NEGATIVES":FOR L=0 TO 1500:NEXT L
607 GOTO 500
610 C=C+B:NEXT
620 PRINT" SUM = ";C
630 PRINT" AVERAGE = ";C/A
640 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N) ";Y$
650 IF Y$="Y" THEN GOTO 500 ELSE 1
1000 REM*HIGHEST COMMON FACTOR*
1002 POKE 30779,1
1005 SOUND 1,3
1007 POKE 30779,0
1010 CLS
1020 PRINT" W E L C O M E "
1030 PRINT" TO"
1040 PRINT" HIGHEST COMMON FACTOR"
1050 PRINT
1060 INPUT" PLEASE ENTER 2 NUMBERS ";A,B
1070 IF A=0 OR B=0 THEN 1000
1080 IF A>B THEN A=A-B
1090 IF A<B THEN B=B-A
1100 IF A>B THEN 1080
1110 PRINT:PRINT" H.C.F. = ";A
1115 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N) ";Y$
1120 IF Y$="Y" THEN 1000 ELSE 1
1130 END
1500 REM*LOWEST COMMON MULTIPLE*
1505 CLS:POKE 30779,1
1506 SOUND 1,2
1508 POKE 30779,0
1510 PRINT" W E L C O M E "
1520 PRINT" TO"
1530 PRINT" LOWEST COMMON MULTIPLE"
1540 PRINT
1550 INPUT" PLEASE ENTER 2 NUMBERS ";A,B
1560 IF A=0 OR B=0 THEN 1500
1570 IF A>B THEN C=A-1 ELSE C=B-1
1580 C=C+1
1590 IF INT(C/A)<>C/A THEN 1580
1600 IF INT(C/B)<>C/B THEN 1580
1610 PRINT:PRINT" L.C.M. = ";C
1620 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N) ";Y$
```

GOTO THIRTEEN

```

1630 IF Y$="Y" THEN 1500 ELSE 1
2000 REM**RADIAN AND DEGREES**
2010 CLS
2012 POKE 30779,1
2015 SOUND 1,2
2018 POKE 30779,0
2020 PRINT"      W E L C O M E"
2030 PRINT"      TO"
2040 PRINT"      RADIAN AND DEGREES"
2050 PRINT:PRINT"WHICH ONE;"
2060 PRINT" 1. RADIAN"
2070 PRINT" 2. DEGREE"
2080 K$=INKEY$
2090 C$=INKEY$:IF C$="" THEN 2090
2100 IF C$="1" THEN GOTO 2200:END
2103 IF C$="2" THEN 2110
2105 IF C$=<>"" THEN 2000
2110 PRINT:INPUT"PLEASE TYPE IN THE RADIAN";B
2120 C=B*180/3.1416
2130 IF C>360 THEN C=C-360:GOTO 2130
2140 PRINT INT (C);"DEGREES"
2150 D=(C-INT(C))*60
2155 PRINT INT (D);"MINUTES"
2160 E=(D-INT(D))*60
2165 PRINT INT (E);"SECONDS":PRINT
2170 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$
2180 IF Y$="Y" THEN 2000 ELSE 1
2200 INPUT" DEGREES";A
2210 INPUT" MINUTES";B
2220 INPUT" SECONDS";C
2230 PRINT
2240 D=A+B/60+C/3600
2250 IF D>360 THEN D=D-360:GOTO 2250
2260 D=D*3.1416/180
2270 PRINT:PRINT D;"RADIAN"
2280 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$
2290 IF Y$="Y" THEN 2000 ELSE 1
2300 END
2500 REM *TEMPERATURE*
2510 CLS
2512 POKE 30779,1
2515 SOUND 1,2
2518 POKE 30779,0

2520 PRINT"      W E L C O M E"
2530 PRINT"      TO"
2540 PRINT"      TEMPERATURE"
2550 PRINT:PRINT" WHICH ONE DO YOU WANT"
2555 PRINT" 1.DEGREE-F"
2556 PRINT" 2.DEGREE-C"
2560 K$=INKEY$
2570 C$=INKEY$:IF C$="" THEN 2570
2571 IF C$="2" THEN 2700
2572 IF C$="1" THEN 2575
2573 IF C$=<>"" THEN 2500
2575 INPUT "PLEASE TYPE IN DEGREE-C";B
2580 PRINT B;"DEGREE-C =";
2590 PRINT B*9/5+32;"DEGREE-F"
2600 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$

2610 IF Y$="Y" THEN GOTO 2500 ELSE GOTO 1
2620 END
2700 INPUT"PLEASE TYPE IN DEGREE-F";B
2710 PRINT B;"DEGREE-F =";
2720 PRINT (B-32)*5/9;"DEGREE-C"
2740 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$

2750 IF Y$="Y" THEN GOTO 2500 ELSE GOTO 1
2760 END
3000 REM **FOOT AND METRE**
3010 CLS
3012 POKE 30779,1
3015 SOUND 1,2
3018 POKE 30779,0
3020 PRINT"      W E L C O M E"
3030 PRINT"      TO"
3040 PRINT"      FOOT AND METRE"
3050 PRINT
3060 PRINT"      WHICH ONE DO YOU WANT"
3070 PRINT"      1. FIND FOOT"
3080 PRINT"      2. FIND METRE"
3090 K$=INKEY$
3100 C$=INKEY$:IF C$="" THEN 3100
3110 IF C$="1" THEN 3200
3111 IF C$="2" THEN 3115
3112 IF C$=<>"" THEN 3000
3115 INPUT" PLEASE TYPE IN FEET";B
3120 PRINT B;"FEET =";
3125 PRINT .3048*B;"METRES"
3130 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$

3140 IF Y$="Y" THEN 3000 ELSE 5
3150 END
3200 INPUT" PLEASE TYPE IN METRES";B
3210 PRINT B;"METRES = ";
3230 PRINT B/.3048;"FEET"
3240 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$

3250 IF Y$="Y" THEN 3000 ELSE 1
3260 END
3500 REM **POUND AND KILOGRAM**
3510 CLS
3512 POKE 30779,1
3515 SOUND 1,2
3520 POKE 30779,0
3530 PRINT"      W E L C O M E"
3540 PRINT"      TO"
3550 PRINT"      POUND AND KILOGRAM"
3560 PRINT
3570 PRINT:PRINT" WHICH ONE DO WANT"
3580 PRINT" 1. POUND"
3590 PRINT" 2. KILOGRAM"
3600 K$=INKEY$
3610 C$=INKEY$:IF C$="" THEN 3610
3620 IF C$="1" THEN 3700
3621 IF C$="2" THEN 3630
3622 IF C$=<>"" THEN 3500
3623 END
3630 INPUT" PLEASE INPUT POUNDS";B
3640 PRINT B;"POUNDS ="; GOTO FOURTEEN
3650 PRINT .4536*B;"KILOGRAMS"

```

```

3660 PRINT:INPUT" DO YOU WANT ANOTHER GO
(Y/N)";Y$
3670 IF Y$="Y" THEN 3500 ELSE 1
3680 END
3700 INPUT"PLEASE INPUT KILOGRAMS";B
3710 PRINT B;"KILOGRAMS =" ;
3720 PRINT B/.4536;"POUNDS"
3740 PRINT:INPUT" DO YOU WANT ANOTHER GO
(Y/N)";Y$
3750 IF Y$="Y" THEN 3500 ELSE 1
3760 END
4000 REM **GALLON AND LITRE**
4010 CLS
4020 POKE 30779,1
4030 SOUND 1,2
4040 POKE 30779,0
4050 PRINT"      W E L C O M E"
4060 PRINT"      TO"
4070 PRINT"      GALLON AND LITRE"
4080 PRINT:PRINT" WHICH ONE DO YOU WANT;""
4090 PRINT"      1. GALLON"
4100 PRINT"      2. LITRE"
4110 K$=INKEY$
4120 C$=INKEY$;IF C$="" THEN 4120
4130 IF C$="1" THEN 4200
4131 IF C$="2" THEN 4140
4132 IF C$=<>"" THEN 4000
4133 END
4140 PRINT:INPUT"PLEASE TYPE IN GALLONS";B
4145 PRINT B;"GALLONS =" ;
4150 PRINT 4.546*B;"LITRES"
4155 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$
4160 IF Y$="Y" THEN 4000 ELSE 1
4170 END
4200 PRINT:INPUT" PLEASE TYPE IN LITRES";B
4210 PRINT B;"LITRES =" ;
4220 PRINT B/4.546;"GALLONS"
4230 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$
4240 IF Y$="Y" THEN 4000 ELSE 1
4250 END
4500 REM **DEPRECIATION**
4510 CLS
4520 POKE 30779,1
4530 SOUND 1,2
4540 POKE 30779,0
4550 PRINT"      W E L C O M E"
4560 PRINT"      TO"
4570 PRINT"      DEPECIATION"
4580 PRINT:PRINT"PLEASE TYPE IN"
4590 INPUT" ORIGINAL PRICE";A
4600 INPUT" DEPRCIATION RATE (%);B
4610 INPUT" NO. OF YEARS";C
4620 PRINT:PRINT"DEFRECTION =" ;
4630 B=B/100
4640 D=A*B*(1-B)^(C-1)
4650 D=INT(D*10+.5)/10
4660 PRINT D
4670 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$
4680 IF Y$="Y" THEN 4500 ELSE 1
4690 END

5000 REM***NUMBER SORTING****
5010 CLS
5020 POKE 30779,1
5030 SOUND 1,2
5040 POKE 30779,0
5050 PRINT"      W E L C O M E"
5060 PRINT"      TO"
5070 PRINT"      SORTING NUMBERS"
5080 PRINT
5090 PRINT" SORTING NOS. (0-99)"
5100 INPUT" HOW MANY NUMBERS";A
5110 DIM A(99)
5120 FOR I=1 TO A
5130 PRINT" NO.;"I; : INPUT A(I-1)
5140 NEXT
5150 FOR J=0 TO A-2
5160 FOR I=0 TO A-2
5170 IF A(I)<A(I+1) THEN 5190
5180 B=A(I) : A(I)=A(I+1):A(I+1)=B
5190 NEXT:NEXT
5200 FOR I=0 TO A-1
5205 PRINT
5210 PRINT A(I);
5220 NEXT
5230 PRINT:INPUT" DO YOU WANT ANOTHER GO (Y/N)";Y$

5240 IF Y$="Y" THEN 5000 ELSE 1
5250 END
5500 REM***WORD SORTING***
5510 CLS
5520 POKE 30779,1
5530 SOUND 1,2
5540 POKE 30779,0
5550 PRINT"      W E L C O M E"
5560 PRINT"      TO"
5570 PRINT"      WORD SORTING"
5580 PRINT
5590 PRINT" SORTING WORDS (0-99)"
5600 INPUT" HOW MAY WORDS";A
5610 DIM A$(99)
5620 FOR I=1 TO A
5630 PRINT" WORD";I;:INPUT A$(I-1)
5640 NEXT
5650 FOR J=0 TO A-2
5660 FOR I=0 TO A-2
5670 IF A$(I)<A$(I+1) THEN 5690
5680 B$=A$(I):A$(I)=A$(I+1):A$(I+1)=B$
5690 NEXT:NEXT
5700 FOR I=0 TO A-1
5710 PRINT A$(I); " ";
5720 NEXT
5730 PRINT:INPUT"DO YOU WANT ANOTHER GO (Y/N)";Y$

5740 IF Y$="Y" THEN 5500 ELSE GOTO 1
5750 END

GOTO SIXTEEN

```

SOFTWARE FOR SALE FROM VSOFTWAREZ

39 Agnes St., TOOOWONG, QLD. 4066, AUSTRALIA. (07) 371 3707.

AUGUST 1989.

We discontinued most of our software as from the 1st. of November 1988.

We will only stock the most popular units.

The list under "EXISTING SOFTWARE" is items we will continue to sell. Those marked "+LL" include a LISTING so that you can modify it to suit your own needs.

The list under "DISCONTINUED SOFTWARE" is what we still have in stock. Other items not listed at all will not be supplied. I have printed a list of software writers who may supply items direct to purchasers. It is just not viable for us to stock items that are not selling. Prices of most software is now reduced to clear stocks. We trust you understand.

All prices are correct at time of printing, but may change without notice. All articles available while stocks last. All prices in A\$.

All tape software includes postage up to four tapes.

When ordering software, always state := which computer VZ200 or VZ300, if you have an expansion RAM unit, and if you have a disc drive system connected or denote as below.

VZ1 = unexpanded VZ200. VZ2 = unexpanded VZ300.

VZ3 = expanded VZ200. VZ4 = expanded VZ300.

VZ5 = VZ200/VZ300 with 64K RAM PACK.

IE, TU6 = Tape only unit of U6. DB46 = Disc only unit of B46.

D/TU19 = Tape or Disc unit available of U19.

The price stated is for a Tape unit. If a Disc unit is required, add \$5.00, to the Tape price. The price of a Disc unit is as stated.

We accept BANKCARD and VISACARD, as well as bank, building society, credit union, private cheques, or Aust Post money orders.

Make cheques payable to J.D. HALTON or VSOFTWAREZ.

***** NEW SOFTWARE *****

DB60. QUICKWRITE TEXT EDITOR V4 II \$40.00. 64K RAM Pack is a must.

This new unit is based on the QUICKWRITE WORDPROCESSOR. All the features of QW V3 and V4 are included, plus many more. The unit is probably the largest M/L software written for the VZ. You must have a 64K RAM expansion installed as the three top 16K banks are switched by the software as required. The file space for your document is about 40K which is ample for most requirements.

The unit is listed in the Australian Personal Computer magazines' Software Guide 1988. Files saved by QUICKWRITE V3 and V4 can be loaded as normal.

We will not allow any discount for previous purchasers of QW V3 or V4.

Tape files made with the old DSE EMF WP can be also loaded. Another very useful feature is the ability to also load M/L source code files made with the DSE Editor/Assembler. The SET UP MODE is where one sets up the different printer commands IE, line length, column length, margin, page, gap, tab, indent, double spacing, number of copies etc. These are all saved on the disc document file which means the user saves time when loading the file at another time.

OH yes, disc files can be MERGED with another file that is already in memory!!

SCREEN ECHO is another feature which gives the user WYSIWYG (What You See Is What You Get) which is great for column text with less than 31 characters, but is still helpful with longer lines, "wrap around" notwithstanding.

A special CONVERSION programme is included which allows the loading of BASIC programmes which do not have any EXTENDED BASIC commands written in them. See page three and four. An instruction booklet is of course included.

QUICKWRITE AND TEXT EDITOR CAN ONLY BE PURCHASED FROM US.

DYG59. NAME THE TOWNS. \$5.00. VZ3-VZ4. This is another piece of educational software written by Mr Larry Taylor.

The aim is to enter the name of the town corresponding to the location of a flashing point on a map of Australia.

There are four selectable skill levels. It is suitable for children in years 4 - 7 (ages 8 - 12).

A High-Res game.

+ EXISTING SOFTWARE +

D/TB1	CASH BOOK LEDGER	\$ 20.00.	VZ3-VZ4. +LL.
D/TE4	MATHS COUNTDOWN	\$ 5.00.	VZ3-VZ4.
DB4	LE' VZ D'BASE	\$ 50.00.	VZ3-VZ4. +LL.
TU6	VZ EXTENDED BASIC	\$ 20.00.	VZ1-VZ4.
DB16	CHEQUE LEDGER D.	\$ 40.00.	VZ3-VZ4. +LL.
D/TU19	COPY/PROTECT.	\$ 20.00.	VZ1-VZ4.
D/TU48	FILESEARCH.	\$ 5.00.	VZ1-VZ4.
D/TG44	MONOPOLY.	\$ 8.00.	VZ3-VZ4.
D/TG45	MONOPOLY.	\$ 8.00.	VZ4.
D/TG50	ESCAPE RIVER.	\$ 8.00.	VZ3-VZ4.
DB46	QUICKWRITE.	\$ 40.00.	VZ3-VZ4.
D/TU49	VZ-EPSON PRINT/PATCH.	\$ 10.00.	VZ1-VZ4.
DU1	CONVERT2.	\$ nil	VZ3-VZ4.
See DB46 QUICKWRITE.			
D/TG53	GALACTIC EMPIRES.	\$ 8.00	VZ3-VZ4.
D/U56	DISKOP94 +2.	\$ 10.00.	VZ3-VZ4.
DB57	QUICKWRITE V4.	\$ 40.00.	VZ3-VZ4.
D/TG58	FACTORY.	\$ 15.00.	VZ4.
D/TE59	NAME THE TOWNS.	\$ 5.00.	VZ3-VZ4.
DB60	QW-TEXT EDITOR.	\$ 40.00.	VZ5.

DISCONTINUED SOFTWARE

ALL 50% off
While stocks last.

D/TE5	COORDINATES	\$ 10.00.	VZ2-VZ4.
D/TE7	MICROSCOPE	\$ 8.00.	VZ3-VZ4.
DU47A	DISKOP32	\$ 10.00.	VZ4.
D/TG52	SOLO BATTLESHIPS.	\$ 15.00.	VZ2-VZ4.
DPD2	PUBLIC DOMAIN.	\$ 10.00.	VZ1-VZ4.

***** USED SOFTWARE *****

As with used hardware, there is no "money back warranty". Also you must include A\$2.00 for postage and packing. Instructions or operations manual may or may not be included.

Tape DSE HORSE/RABBIT RACING
Tape DSE ELEMENTRY GEOMETRY
Tape DSE INVADERS
Tape DSE PLANET CONTROL
Tape DSE BIORHYTHM/CALENDAR
Tape DSE MATCHBOX
Tape DSE HOPPY
Tape DSE DEMONSTRATION
Tape DSE MAILING LIST
Tape DSE CIRCUS

All \$1.00each.

Disc DSE	DATA BASE	\$ 10.00
Tape DSE	WORD PROCESSOR	\$ 5.00.
Disc DSE	GAMES DISC #1	\$ 2.00
Tape VSOFTWAREZ	FILESEARCH	\$ 2.00.
Tape VSOFTWAREZ	EXTENDED BASIC 2.0.	\$ 5.00.
Disc VSOFTWAREZ	COPY PROTECT	\$ 5.00.

HARDWARE AND FIRMWARE FOR SALE.

VSOFTWAREZ, 39 Agnes St., TOOOWONG. QLD. 4066.
AUSTRALIA. 'Phone (07) 371 3707.

As with our software, we are also going to discontinue most hardware sales. We will be continuing to sell books.

Unlike our software prices, these do NOT include postage. Always include extra money with your order and we will send any surplus back in the parcel or put it towards any credit you may wish, such as to LE'VZ, if you are an OOP. If you wish to receive LE'VZ, read page 11.

Prices are in Australian dollars (AUD) as at the 1st. of May 1989. Items available while stocks last. There is NO WARRANTY on used items, but all are tested OK.

One VZ300 Disc System with 16K RAM and Joysticks used \$300.00.
One VZ200 V1.2 16K with 16k RAM used \$ 40.00.

BOOKS

VPROGRAMMEZ-VZ-V1 new \$ 10.50 each.
Surface postage in Australia and NZ is included.
This is my own special book for beginners and advanced V'ers.

VZ200-VZ300 Assembly Language Programming Manual for Beginners by Steve Olney, new \$ 25.00 each.

Beginners Guide to the VZ200/VZ300 Editor Assembler by Peter Branson new \$ 20.00 A\$ each.
This book explains in simple language how to use the Peter Smith Editor Assembler unit. The little instruction booklet that comes with the tape is not very easy to understand to many folk. Peter uses some short M/L routines to explain the use of the E/A but he does not teach you M/L as such. As I mentioned previously in LE'VZ, the book will be printed and put together when ordered. I do this as soon as possible, but there will be a delay. There are fifty eight pages of A4 size so it is good value for money.

OTHER VZ USER GROUPS & CLUBS.

AUSTRALIA.

VZ USER.
Now appears to have gone defunct.

VZ DOWN UNDER.
MR H.M Huggins, 12 Thomas St., MITCHAM. VIC. 3132.

HUNTER VALLEY VZ USERS GROUP.
C/O P.O. Box 161, JESMOND. NSW. 2299.

WAVZ ENTHUSIASTS GROUP.
MR Graeme Bywater, P.O. Box 388, MORLEY. WA. 6062.

BRISBANE VZ USERS WORKSHOP.
C/O Mr. Bob Jones, 63 Tingalpa St.,
WYNNUM WEST. QLD. 4178.

NEW ZEALAND.

VZ LINK.
MR Peter Hill, P.O.Box 1972 C.P.O. AUCKLAND. NZ.
Peter Hill has not been in contact with me for a year or so. Perhaps he has also stopped publishing his newsletter.

```

6000 RFM***MELODY**  

6010 CLS  

6015 POKE 30779,1  

6020 SOUND 1,2  

6030 POKE 30779,0  

6040 PRINT" W E L C O M E"  

6050 PRINT" TO"  

6060 PRINT" MELODY PLAYER"  

6070 PRINT  

6080 INPUT" ENTER NUMBER OF NOTES ?";N  

6090 PRINT:PRINT"PLEASE ENTER THE NOTES"  

6100 LETA%=(2*N-1)  

6110 FOR I=0 TO N-1  

6120 INPUT" FREQUENCY CODE";A%(I*2)  

6125 IF A%<0 THEN 6000  

6130 INPUT" DURATION CODE";A%(I*2+1)  

6135 IF A%<0 THEN 6000  

6140 NEXT  

6150 FOR I=0 TO N-1  

6155 POKE 30779,1  

6160 SOUND A%(I*2),A%(I*2+1)  

6170 NEXT  

6175 POKE 30779,0  

6177 CLS:PRINT:PRINT:PRINT:PRINT:PRINT  

6180 PRINT:PRINT"WHAT IS YOUR CHOICE"  

6190 PRINT" 1. HEAR IT AGAIN"  

6200 PRINT" 2. PLAY ANOTHER TUNE"  

6210 PRINT" 3. GO BACK TO MAIN MENU"  

6220 K$=INKEY$  

6230 C$=INKEY$:IF C$="" THEN 6230  

6240 IF C$="1" THEN GOTO 6150  

6250 IF C$="2" THEN GOTO 6000  

6260 IF C$="3" THEN GOTO 1  

6270 IF C$=<>"" THEN 6177  

6280 END  

9000 REM*****END*****  

9010 CLS  

9020 POKE 30779,1  

9030 SOUND 1,2  

9040 POKE 30779,0  

9050 PRINT:PRINT:PRINT:PRINT:PRINT:PRINT  

9060 PRINT" ARE YOU SURE YOU WANT TO END"  

9070 PRINT:PRINT" (Y/N)  

9080 INPUT N$  

9090 IF N$="Y" THEN 9100  

9095 IF N$="N" THEN 1  

9097 IF N$=<>"" THEN 9000  

9098 END  

9100 CLS:PRINT:PRINT:PRINT:PRINT:PRINT  

9110 PRINT" G O O D B Y E"  

9120 GOTO 9120

```

C'MON THE BOMBERS!!!

